

REMARKS/ARGUMENTS

Claims 1-9 remain in this application, and Claims 10-14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a non-elected invention.

Claims 1-9 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Foster et al (U.S. Patent No. 6,616,804) in view of Larson et al (U.S. Patent No. 3,933,561).

The Examiner contends that Foster discloses an abuse resistant, cast acoustical ceiling tile having a core made from a starch gel and mineral wool fiber composition, wherein the front surface of the tile is coated with aggregate particles comprising calcium carbonate and the noise reduction coefficient (NRC) value is at least about 0.50.

Upon a careful review of the Foster et al patent, it will be noted that the ceiling tile is not made by a casting process but rather it is made by a wet felting process. The Foster et al patent discloses (column 5, lines 57-59) that the moving foraminous support wire formation process of the Foster et al invention produces a homogeneous fiberboard structure. The Foster et al process is described in detail (column 7, lines 37-50) wherein it refers to Figure 3 and the use of a foraminous support wire to form a wet felt. The Foster et al process uses standard board formation techniques, e.g. a Fourdrinier machine (column 5, lines 41-42). The Foster et al ceiling tile is not a cast acoustical ceiling tile.

But more importantly, the Examiner has incorrectly concluded that the front surface of the Foster et al tile is coated with aggregate particles. There is no basis for this conclusion. Quite to the contrary, the Foster et al patent describes in great detail that the surface of the Foster et al ceiling tile is "substantially smooth" (column 2, lines 59-67 and continued on column 3, lines 1-25). In contrast thereto, the surface of applicants' ceiling tile is definitely not smooth for it is coated with aggregate particles.

Furthermore, the front surface of the Foster et al ceiling tile is definitely not coated with aggregate particles comprising calcium carbonate. The Examiner referred to the disclosure in column 4, lines 20-26. The disclosure in column 4 relates to the "fiberboard 12" which does not constitute the front surface. The "fiberboard 12" is the

base layer and the “nodulated overlay 16” provides the “substantially smooth surface 17” which is the front surface.

In addition, the reference to calcium carbonate in column 4 indicates that it is a non-fibrous filler which is mixed into the core of the fiberboard 12, and the calcium carbonate is not applied to the surface. The Foster et al patent does disclose that non-fibrous fillers can be incorporated into the nodulated overlay (column 7, lines 22-34), but there is no disclosure that these non-fibrous fillers can be or should be applied to the surface of the overlay layer. The non-fibrous fillers are thoroughly mixed into the nodulated overlay material (column 7, lines 64-67).

The Examiner has also cited the Larson et al patent relative to the size of the calcium carbonate aggregate particles. However, this patent which relates to a process for manufacturing ultra-thin polymer membranes is clearly non-analogous art and there is no basis for combining the teachings of Foster et al and Larson et al. In the Larson et al process, the calcium carbonate is an anti-blocking or dusting agent which is used in the separation and retrieval of the ultra-thin polymer membranes (column 13, lines 20-62). There is no relationship in the function provided by the calcium carbonate, a non-fibrous filler in Foster et al and a dusting agent in Larson et al.

The Examiner states that it would have been obvious to one of ordinary skill in the art at the time of the invention to (sic “use”) Larson’s particle size as the particle size in Foster in order to improve the anti-blocking agent. However, there is no anti-blocking agent in Foster.


As shown in Example 2 of this patent application, there is some criticality in the particle size of the calcium carbonate particles. In this Example, the fine particles (Avg. Particle Mean Diameter was 800 microns) did not provide any improvement in impact resistance. Applicants have limited their claims to an aggregate particle mean diameter of at least about 1,000 microns. In the Larson et al patent, the anti-blocking agents are used for dusting which would indicate that they are fine particles and would not provide abuse-resistance in applicants’ ceiling tile. Larson et al discloses that the particulate materials can be both coarse (e.g. - 10 mesh) and fine (e.g. - 325 U.S. mesh). The fine particles of Larson et al are definitely outside the scope of applicants’ claims. Larson et al discloses that the coarse and fine particles are equivalent for anti-blocking or dusting

purposes, but applicants have discovered that fine particles do not provide abuse resistance in cast ceiling tiles.

In view of the Examiner's earlier restriction requirement, applicants retain the right to present claims 10-14 in a divisional application.

Applicants respectfully request that a Notice of Allowance of claims 1-9 be issued in this case.

Respectfully submitted,


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